

Addressing Project Noise

How WSDOT is Identifying the Extent of Construction Noise

What has changed in addressing noise in Biological Assessments?

Noise is often the farthest-reaching impact from construction activities, and therefore typically determines the size and shape of the project Action Area. Most often, project biologists have assigned an arbitrary distance to quantify the extent of noise, in the absence of data. For example, anytime heavy equipment use was proposed, an automatic 0.5-mile distance was assumed. This distance was estimated to be a standard 1-mile anytime pile driving was part of the project.

WSDOT is now using a method to estimate the extent of noise impacts based on identifying both the construction noise level and the baseline (ambient) noise level, and comparing the two. This is possible in both terrestrial and underwater settings, and can more accurately identify the true extent of noise impacts. Technical concepts and step-by-step guidance on completing a noise assessment can be found in the Noise Impact Assessment module of the WSDOT Advanced BA Training Manual (<http://www.wsdot.wa.gov/TA/Operations/Environmental/EnviroUpdates.html>).

What defines the “extent of noise impact”?

Baseline (ambient) noise conditions are defined as the typical noise level around the project area, in the absence of any project activities. As noise spreads, it attenuates to a lower level based on several factors. Identifying the point where noise from construction activities is indistinguishable from baseline noise provides a location for the extent of project noise impacts.

Can underwater noise be quantified as well?

When a project has underwater sound impacts, it is now required to quantify the extent of those impacts using a recognized noise model. The model currently in use by the US Fish and Wildlife Service and National Marine Fisheries Service (the “Services”) is referred to as the Practical Spreading Loss model. Using this model provides a way for the project biologist to more accurately define the underwater zone of impact and determine the true action area. In conjunction with this model, WSDOT currently uses a Linear Loss model to provide another idea of underwater noise attenuation. The use of both models is outlined in the Noise Impact Assessment module of the WSDOT Advanced BA Training Manual (<http://www.wsdot.wa.gov/TA/Operations/Environmental/EnviroUpdates.html>).